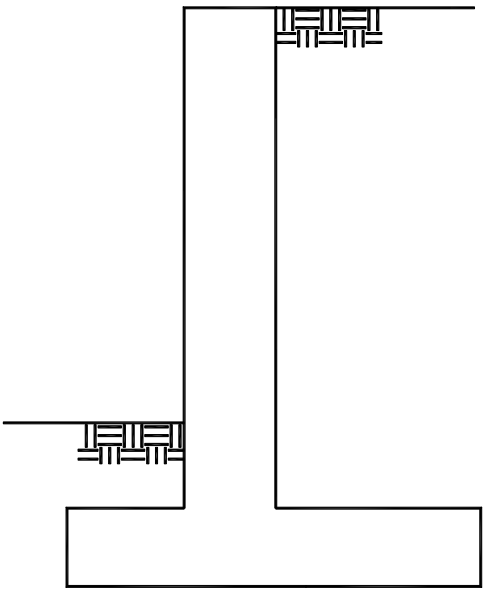
Fairfax County

Typical Retaining Wall Details

Based on the 2000 Virginia Uniform Statewide Building Code



CONTENTS

The use of this package in lieu of submitted drawings applies to timber, reinforced masonry and reinforced concrete retaining walls with heights no greater than 5'-0", level backfill, no surcharge loading, and residential use only. The use of the *Fairfax County Typical Retaining Wall Details* for a tiered or stacked retaining wall system is strictly prohibited. Retaining walls must be constructed in strict conformance with the details contained herein. A copy of these retaining wall details is required to be on the job site and available to the inspector during the construction and inspection process.

TIMBER RETAINING WALLS

GENERAL NOTES

1. All lumber shall be 6x6, pressure treated in accordance with American Wood-Preservers' Association standards for ground contact, southern pine, grade #2 or better.
2. All spikes shall be 60d or equivalent, hot-dipped galvanized or stainless steel, and driven into pre-drilled holes. Spikes shall be of sufficient length to penetrate the base member a minimum of 2".
3. Member joints shall be staggered a minimum of 3'-6" from joints of the course above and below.
4. Each 6x6 member shall be secured at each end with 2-60d spikes driven vertically into the member below and . Corners shall be secured with 2-60d spikes, driven horizontally as shown in FIGURE 4.

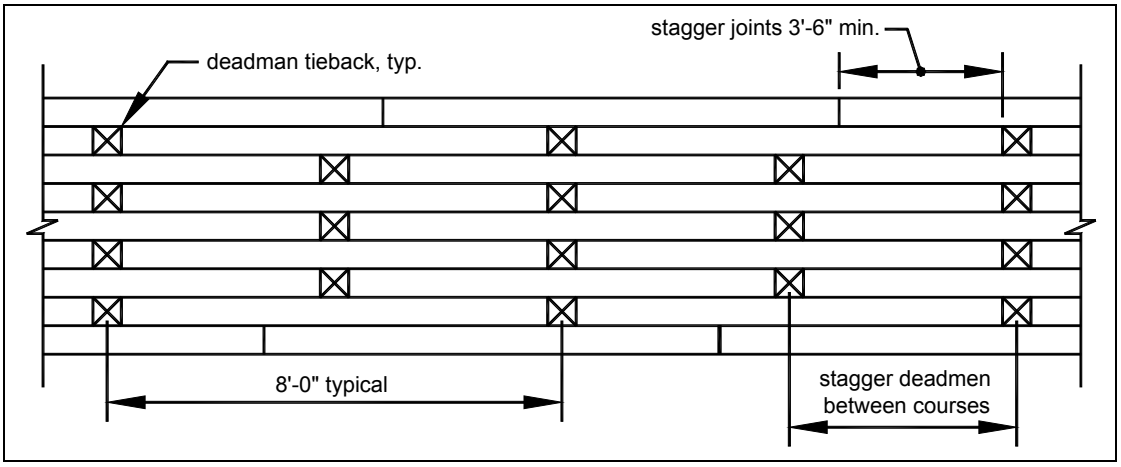


FIGURE 1: TYPICAL ELEVATION

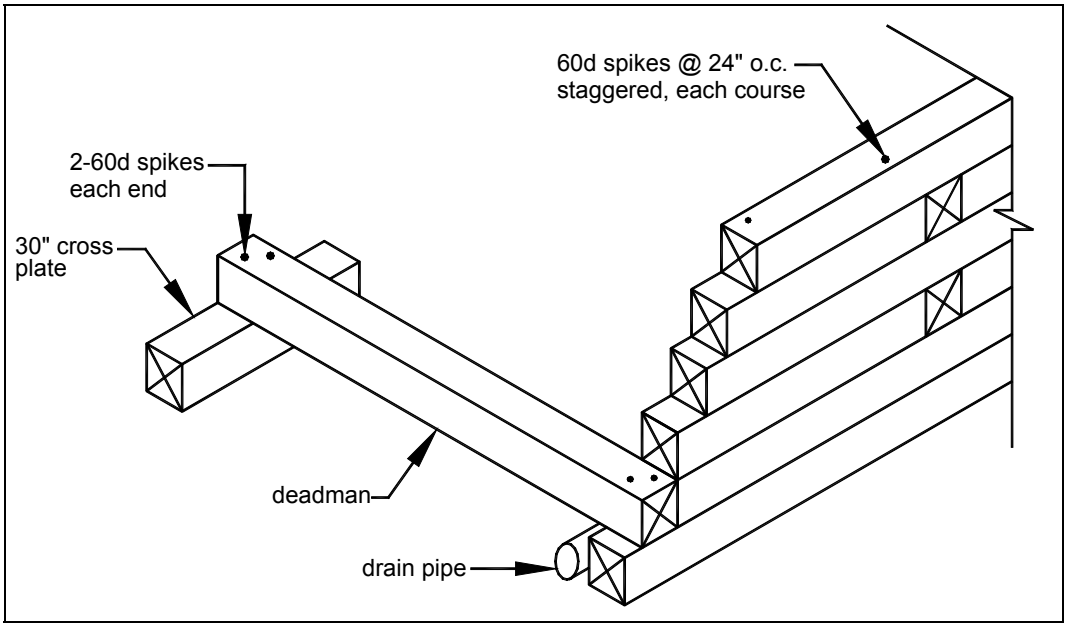


FIGURE 2: TYPICAL DEADMAN DETAIL

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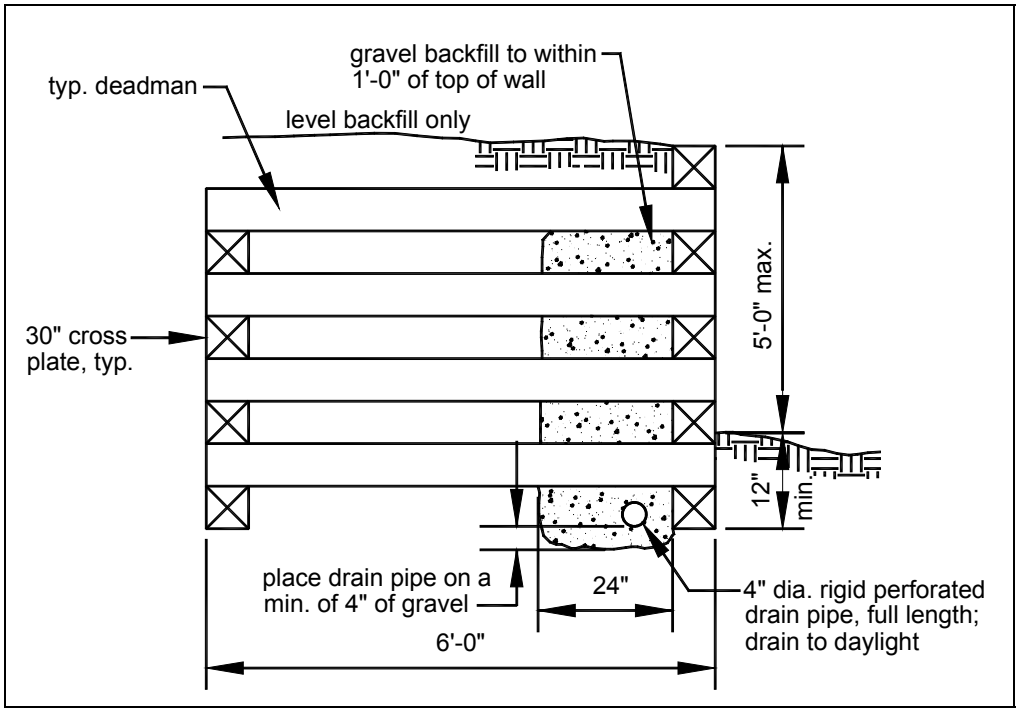

FIGURE 3: TYPICAL SECTION

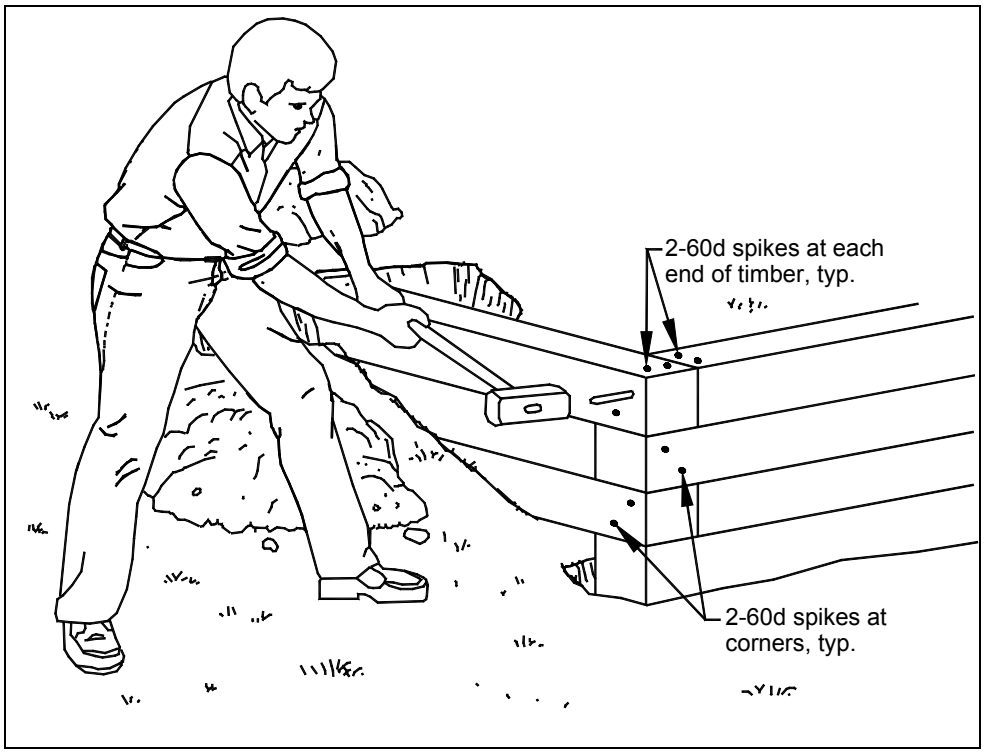

FIGURE 4: TYPICAL CORNER DETAIL

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REINFORCED MASONRY RETAINING WALLS

GENERAL NOTES

1. The minimum concrete compressive strength at 28 days shall be 3,000 PSI and shall comply with ACI 318.
2. Reinforcing steel shall comply with ASTM A615 and shall have a yield strength of 60,000 PSI.
3. Concrete masonry blocks shall comply with ASTM C90.
4. All joint reinforcement, ties and other accessories shall be resistant to corrosion.
5. All head and bed joints shall be 3/8" thick. Bed joints of the starting course over the concrete foundation may be between 1/4" and 3/4". Mortar shall conform to ASTM C270.
6. Backfilling against reinforced masonry retaining walls shall not be permitted until at least 7 days after placing concrete or grout in cores. Heavy equipment shall maintain a distance away from the wall equal to the wall's height. Care shall also be taken to avoid exerting large impact forces on the wall.

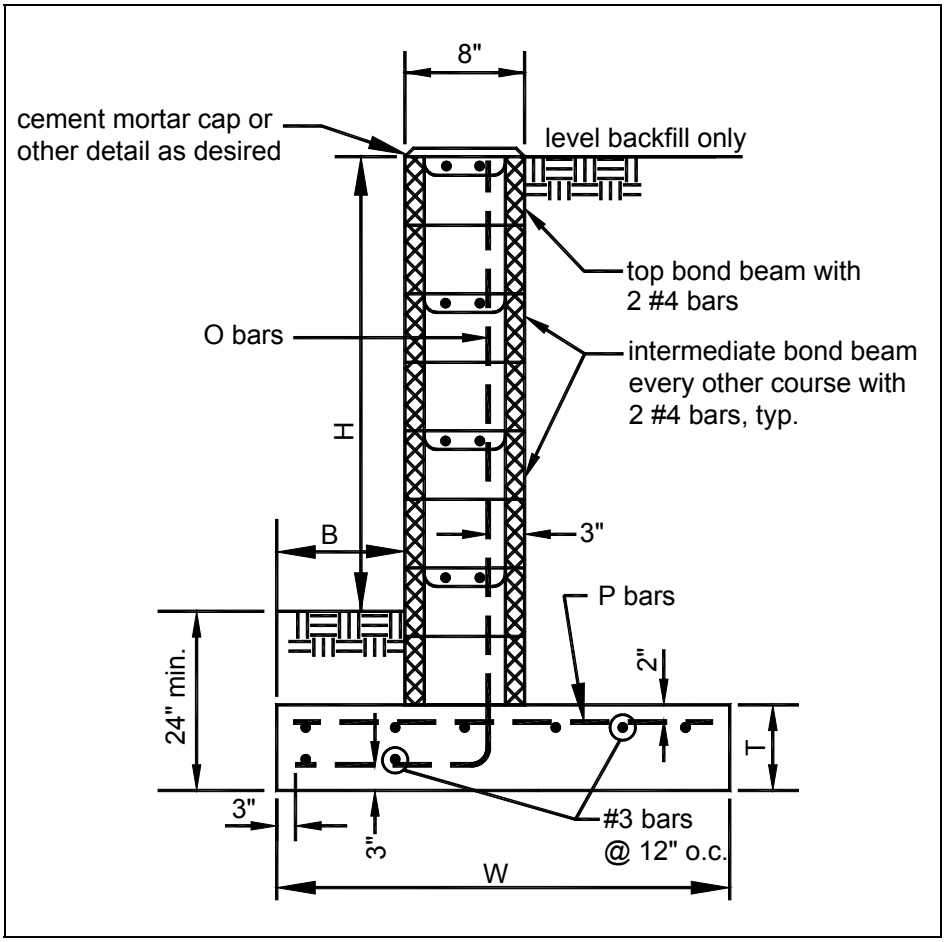

FIGURE 5: TYPICAL MASONRY WALL SECTION

TABLE 1: TYPICAL MASONRY WALL SPECIFICATIONS*

Dimensions				Reinforcing Bars	
H	B	W	T	O	P
2'-0"	12"	2'-8"	9"	#3@32"o.c.	#3@27"o.c.
2'-9"	12"	3'-0"	9"	#4@32"o.c.	#3@27"o.c.
3'-6"	12"	3'-3"	10"	#5@32"o.c.	#3@27"o.c.
3'-10"	14"	3'-8"	10"	#4@16"o.c.	#4@30"o.c.
5'-0"	15"	4'-2"	12"	#6@24"o.c.	#4@25"o.c.

*Reference: National Concrete Masonry Association.

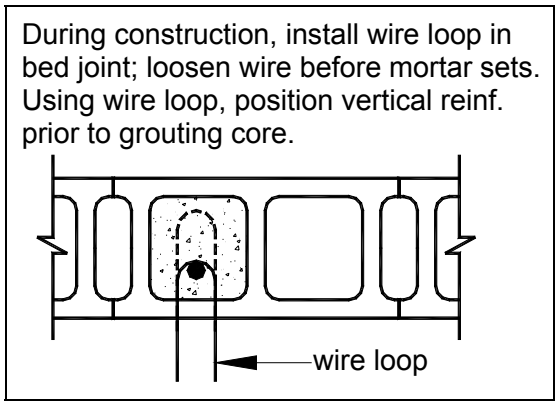

FIGURE 6: VERTICAL REINFORCEMENT TIE HOLD DETAIL

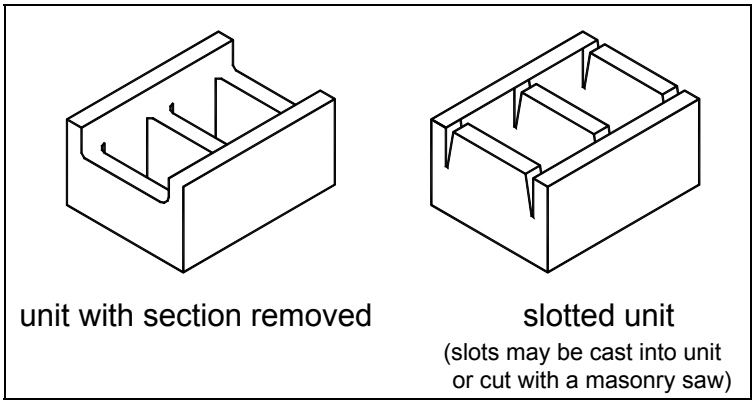

FIGURE 7: BOND BEAM BLOCK TYPE

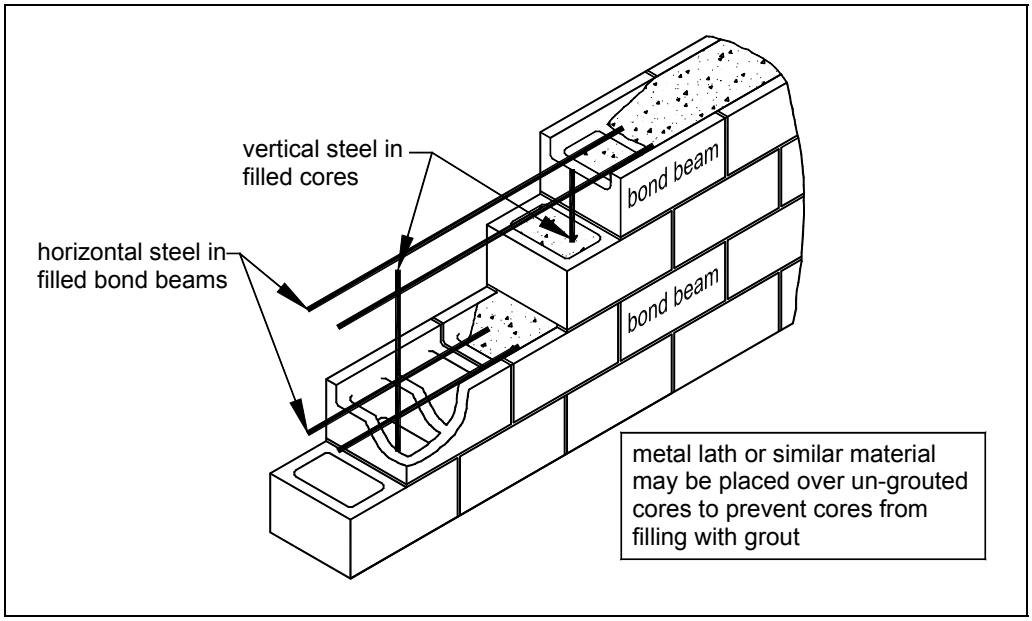

FIGURE 8: TYPICAL WALL REINFORCEMENT DETAIL

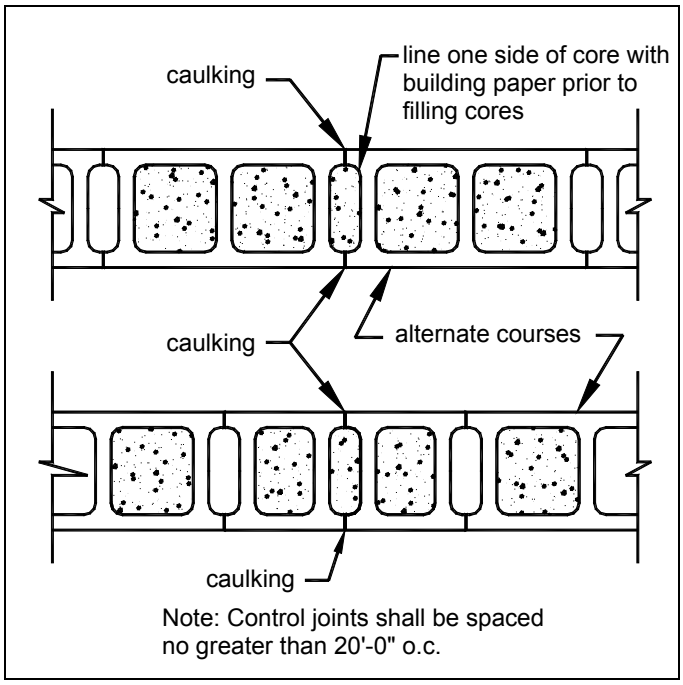

FIGURE 9: TYPICAL CONTROL JOINT DETAIL

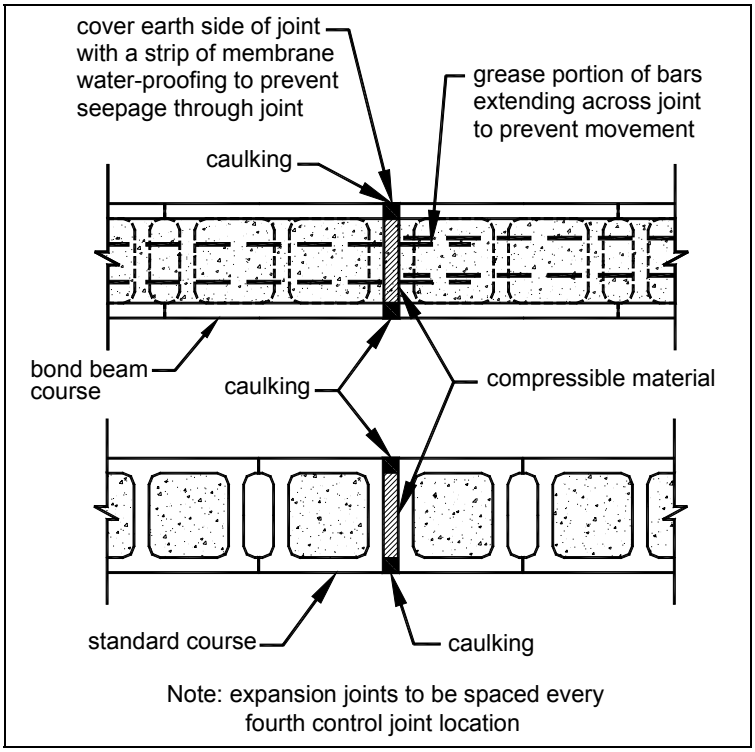

FIGURE 10: TYPICAL EXPANSION JOINT DETAIL

See Sheet 8 for more Typical Details.

CONCRETE RETAINING WALLS

GENERAL NOTES

1. The minimum concrete compressive strength at 28 days shall be 3,500 PSI and shall comply with ACI 318.
2. Reinforcing steel shall comply with ASTM A615 and shall have a yield strength of 60,000 PSI.
3. Backfilling against reinforced concrete retaining walls shall not be permitted until the concrete has reached its 28 day strength. Heavy equipment shall maintain a distance away from the wall equal to the wall's height. Care shall also be taken to avoid exerting large impact forces on the wall.

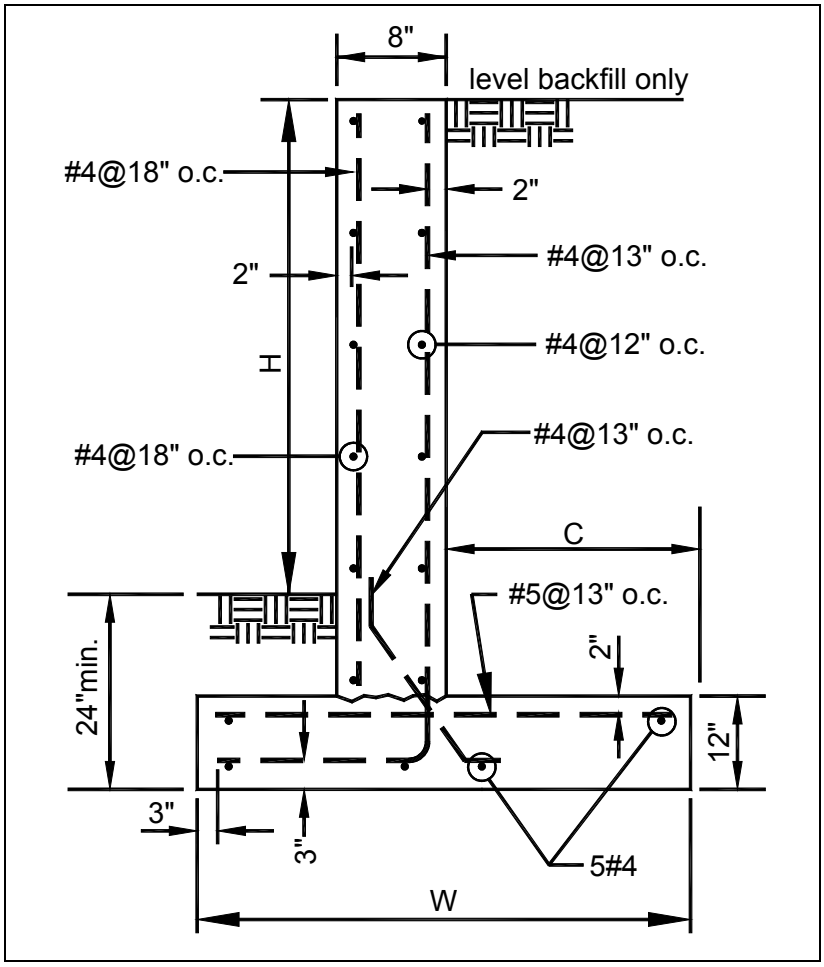

FIGURE 11: TYPICAL CONCRETE WALL SECTION

TABLE 2: TYPICAL CONCRETE WALL DIMENSIONS*

H	C	W
2'-0"	11"	2'-1"
3'-0"	1-3"	2'-7"
4'-0"	1'-8"	3'-1"
5'-0"	2'-0"	3'-7"

*Reference: Concrete Reinforcing Steel Institute

TYPICAL DETAILS (for masonry and concrete walls)

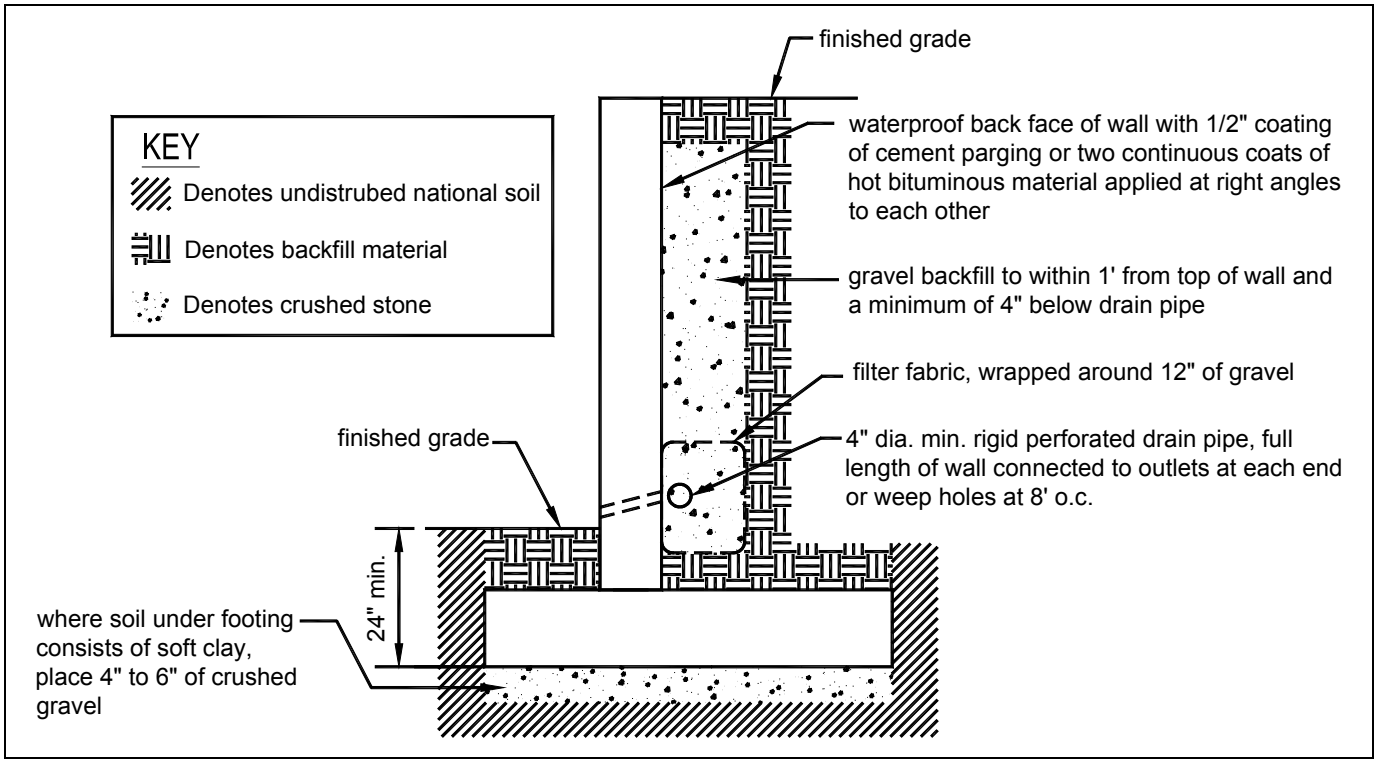

FIGURE 12: TYPICAL BACKFILL AND DRAINAGE DETAIL

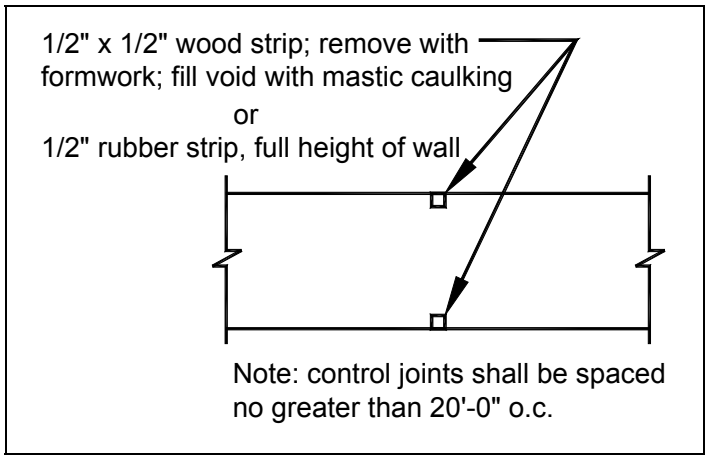

FIGURE 13: TYPICAL CONTROL JOINT DETAIL

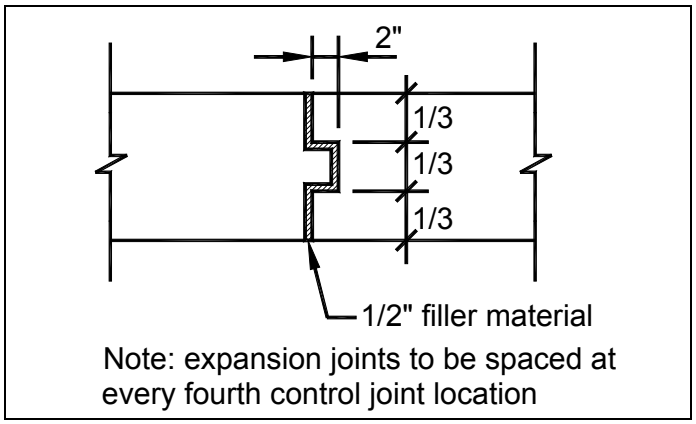

FIGURE 14: TYPICAL EXPANSION JOINT DETAIL

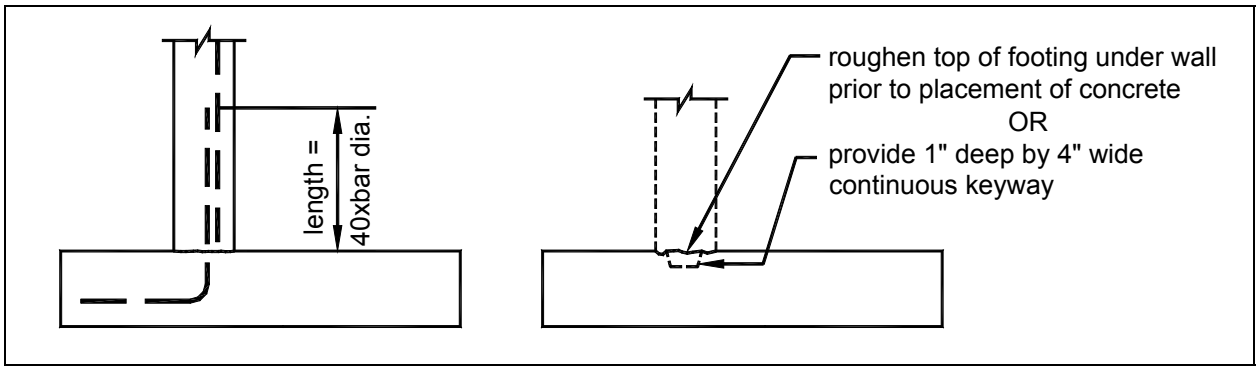

FIGURE 15: TYPICAL DOWEL AND KEYWAY DETAIL

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